



SKYWATCH

Spotter Newsletter

NOAA National Weather Service
Pendleton, OR

newsletter also available at:

newweb.wrh.noaa.gov/pdt/weatherSafety/spotterindex.php

Fall 2005

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Fall 2005 Spotter Highlight...



Grant-26: Tom and Cheryl Berry

We moved to Pine Creek Rd in March 1979. Tom is retired from the US Forest Service and now operates his own saddle shop. Cheryl is retired from working in the office at Grant Union High School, and works part time for the airport, where she is responsible for making weather reports, and studying weather reporting procedures.

We are both airplane pilots, and we have always had an interest in weather phenomena. We felt we were in an ideal location to see and report weather activity. We have a 360 degree view of the John Day Valley from the mountains east of Prairie City to the airport hill in John Day, and beyond. We can see Strawberry Mountain and the Dixie Mountain peaks.

We enjoy taking trips on our Honda Gold Wing and in our Cessna 150 airplane. We have a horse and five mules, which we use to take pack trips into the Eagle Caps, Hells Canyon, and on hunting trips. We have two sons and seven grandchildren.



Precipitation Summary for Water Year 2004-2005 By Marilyn Lohmann

The water year started off on a fine note with most locations receiving normal to above normal precipitation for Oct 2004. Much drier conditions prevail from November 2004 through the winter months until March 2005. February was the driest month with many locations seeing less than 30 percent of the normal precipitation expected in February. Much wetter conditions were seen in April with amounts 100 to 150 percent of normal. May was even wetter with precipitation amounts 150 to 300 percent of normal. June, saw the precipitation taper off with amounts 50 to 100 percent of normal. July, was drier than normal with many locations seeing amounts 30 to 50 percent of normal. August was extremely dry with numerous locations reporting no measurable precipitation. Over all the water year has been well below normal resulting in severe to extreme drought conditions across the region.

Selected stations	Precipitation Oct 2004-Aug 2005	Percent of Normal
Bend	11.00	98
Condon	11.00	79
Heppner	11.25	83
John Day City	12.10	95
Joseph	14.21	92
LaGrande	13.87	83
Madras 2N	10.20	88
Meacham	23.10	64
Mitchell 2NE	13.47	126
Pendleton Airport	9.21	76
Redmond	10.40	127
The Dalles	8.37	60
Union	13.91	102
Wickiup Dam	14.06	66
Dayton	12.63	68
Ellensburg	5.70	66
Hanford	4.36	66
Mt Adams	24.60	59
Prosser	7.25	95
Sunnyside	5.26	78
Whitman Mission	9.69	70
Yakima Airport	6.98	89



New Spotter Training Ready to Go!

When weather spotter trainings kick off again this fall participants will be treated to a completely new and re-vamped spotter training presentation. Although the previous training had all the information you needed to know as a spotter, it was apparent it needed some new pictures, and most especially, some video clips. The new video clips and pictures will enhance learning, and clarify many of the visual clues that need to be recognized for one to be the most accurate weather spotter possible. We look forward to seeing you at the upcoming training in your neck of the woods!

Spotter Stats:

Total: 1,212

New 2004/2005: 153

Spotters Trained 2004/2005: 283

Highest number by County: 209 (Deschutes)

August 12th Wind and Dust Storm By Alan Polan

On the morning of August 12th, a cold front was located in southern British Columbia (B. C.). Moist and unstable air was south of the front in eastern Washington. Meanwhile, a wave in the upper atmosphere was moving south and joining the cold front in extreme southeast B. C. The wave and the cold front proceeded to move together into northeast Washington early in the afternoon. The front produced low-level convergence while the wave aloft produced upper-level divergence. This combination produced ascending motion in the atmosphere, which allowed the moist, convectively unstable air to become buoyant. The resulting convection produced thunderstorms over northeast Washington early in the afternoon.

As the front and the wave continued moving south, thunderstorm activity increased with a cluster of thunderstorms developing north of Spokane from 1:00 PM to 3:00 PM. The gust front from the thunderstorms' downdrafts moved into Spokane with a peak gust of 37 mph at Geiger Field at 3:48 PM. At 3:51 PM, the control tower transmitted an observation that included the remark "WALL OF DUST NW-N MOV S". These thunderstorms moved south through eastern Washington through the afternoon with the thunderstorm downdrafts combining with an influx of cooler air from the cold front to produce a massive outflow boundary.



Very turbulent and gusty winds were in the colder, denser air spreading away from the thunderstorms. The sudden pressure rise along the outflow boundary caused winds to increase to 25 to 35 mph with gusts to 50 mph. The windy conditions produced an enormous amount of blowing dust.

The "wall of dust" produced by the outflow boundary moved to the west and south to the foothills of the southern Washington Cascades and the foothills of the Blue Mountains. The "wall of dust" swept through the Kittitas and Yakima Valleys where the dust reduced visibilities to 1/8 of a mile in Ellensburg, and 1/4 of a mile in Yakima. These photos were taken around 6:55 PM on SR 124 near Prescott in Walla Walla County, just before the dust reduced visibility to near zero. More photos of the dust storm and animations of Doppler radar wind data and visible satellite imagery are available at this website:

http://newweb.wrh.noaa.gov/otx/photo_gallery/august12_storm.php



PDT Float Takes 2nd Place at Annual Round-up Dress-up Parade!

From left to right...
Jon Mittlestadt, Cindy Palmer,
Johnny Blagg, and the
"Wrangler" Mike Cantin

Hurricane Trivia By Mary Smith

Normally, our weather quizzes reflect weather conditions that affect Eastern Washington and Eastern Oregon. Although hurricanes do not directly affect our weather, the severe devastation of Hurricane Katrina and Hurricane Rita has impacted the entire nation. How much do you know about tropical meteorology and hurricane development? Take the following quiz to find out. Good Luck!

1. In order for a tropical system to be classified as a hurricane, the constant wind speed must be at least _____ mph or _____ knots.
a. 40 mph or 35 knots / b. 74 mph or 64 knots / c. 100 mph or 87 knots
2. The eye of a hurricane is usually _____ miles in diameter.
a. 1-4 / b. 25-30 / c. 45-55
3. **True or False.** Usually, light winds and fair weather are associated with the eye of a hurricane.
4. When is hurricane season?
a. January 1-December 31 / b. March 1-July 31 / c. June 1-November 30
5. Which of the hazards produced by a hurricane is responsible for the most deaths?
a. Storm surge / b. Heavy rain / c. Winds
6. What is the deadliest hurricane in recorded history?
a. Hurricane Camille / b. Hurricane Andrew / c. The Galveston Hurricane
7. Before Hurricane Katrina, what was the costliest hurricane in recorded history?
a. Hurricane Camille / b. Hurricane Andrew / c. The Galveston Hurricane
8. What is the name of the scale used to classify hurricanes based on wind speed and storm surge?
a. The Seismic Scale / b. The Fujita Scale / c. The Saffir/Simpson Scale



Remember to send in your answers to have a chance to win! WFO PDT c/o Spotter Quiz
2001 NW 56th Drive
Pendleton, OR 97801

Foggy Days Ahead... By Mike Cantin

Observing a thick blanket of fog in the Columbia Basin is an annual occurrence each fall, with episodes sometimes lasting for weeks. Days on end of fog can be pretty depressing, but the meteorology behind it is quite interesting. Let's take a look at what's going on during those foggy days.

The typical form of fog that we see during the middle and late fall period is called **radiation** fog. This fog forms as heat energy from the surface of the earth is released toward space. On clear nights with very little wind the surface of the earth can intensely radiate heat away, especially if the atmosphere is cold aloft. Once the surface begins to radiate its heat away, it begins to rapidly cool. The temperature could eventually cool to what is called the **dewpoint**. The dewpoint is the temperature at which if the air is cooled to it will become saturated in respect to water. Thus, if the temperature cools to the dewpoint, or at least very close to it, the air near the ground will not be able to hold its water in gaseous form. This gaseous water vapor condenses and forms fog!

To allow enough loss of surface heat energy to take place two typical scenarios are usually to blame. The first is usually brought on by an arctic blast from the north. Cold air streaming southward out of southern British Columbia and Alberta settles down into the Columbia Basin. This arctic air is cold enough that only a small amount of further cooling will generate fog. The second method would be a couple of consecutive nights with little to no cloud cover, and very cold air aloft in the atmosphere. Both of these scenarios will provide a situation where radiation fog becomes a possibility. Many times these scenarios work in conjunction, with the arctic blast moving in, then clear skies above the arctic airmass allowing it to cool even further.

So, we've discussed here why fog forms, but why does it stick around so long? Cold air does not like to budge; in fact it loves to settle in the lowest point possible. The Columbia Basin acts much like a bowl, capturing and holding the cold air between the surrounding mountains. Once the cold air is in place, it takes a moderate to strong cold front to come through and "scoop" out the air and move it somewhere else. If a ridge of high pressure builds over the top of the cold air, warming temperatures aloft will create an **inversion**. This inversion acts like a "lid" over the Basin, with warmer air over the top of colder air. With warm air (that doesn't like to sink) above cold air (that doesn't like to rise), the atmosphere becomes very stable and will not allow much movement. This traps the cold air, and the fog, right where it formed. So until the ridge breaks down and a cold front swings through, the fog will basically stay put with only small movements each day.

The National Weather Service- What's New and What's on the Horizon

By MIC, Michael Vescio

For those of you who think that the National Weather Service (NWS) is the “same old same old” then I urge you to look a little closer. Many of you are aware that the NWS underwent a major modernization in the 1990's, and most of you know that there is a network of sophisticated Doppler radars scanning the skies for severe storms around the clock. But what some of you don't realize is that we did not stop there. The Weather Service has entered the graphical forecast age, which enables us to convey our vital watch/warnings and weather data in an easier to understand format. At WFO Pendleton we like to provide more to our customers than just the seven-day text forecast. So I invite you to explore our website at www.weather.gov. On it you will find numerous new local and national products including a graphical Hazardous Weather Outlook that displays the expected weather hazards for the upcoming week. In the fall and spring we issue the probability of freezing temperatures, while in the summer probability forecasts of reaching 100 degrees are issued. City or county officials can find out what the probabilities of receiving 2, 4 and 6 inches of snow are for their location so they can better prepare for keeping roads open during winter storms, and those planning outdoor activities can see how many hours of sunshine are expected for today and tomorrow. We plan on addressing other local hazardous weather such as blowing dust potential, forecast confidence intervals, and 24-hour changes in temperature, wind, and relative humidity. All of the National Weather Service will continue to evolve in the coming years as technology improves. We will launch new satellites, implement a new Phased Array Radar that provides critical information on storms up to five times faster than our current NEXRAD radars, and modernize our Cooperative Observer Program. We will also branch out into other areas of environmental prediction such as Air Quality, Space Weather, and Climate forecasting, partnering with our parent agency the National Oceanic and Atmospheric Administration (NOAA), EPA, NASA, and other federal and state agencies. The NWS is committed to providing its customers with the highest quality products and services using the latest cutting-edge technology. So be sure to keep up to date on the latest forecasts and warnings from the NWS. We have dedicated professionals working around the clock to ensure that you are informed of the current and expected weather for the next seven days.

Staff Spotlight: George Perry, General Forecaster

Hi, I'm the new general forecaster in the office. I've been interested in weather all my life, but didn't take it up as a career until later in life than most meteorologists.

I grew up in Oakland, CA. Some of my earliest memories involve weather, although we didn't often have exciting or unusual weather. At 5, I would read my mother the newspaper temperature table while she fixed dinner. I still remember the first time I saw hail and when heavy rain caused flooding in my neighborhood. As I got older, I installed a rain gauge on the roof of our house and would take rainfall measurements. I kept careful records for 10 years. We averaged about 20% more rain than Oakland airport.

When I went off to college at the University of California, I didn't study meteorology as a major. I was more interested in computers and other sciences. Also, Berkeley didn't have a meteorology department, so I studied chemistry and later computer science.

After college, I worked for a chain of camera stores for 14 years in a variety of positions. I enjoyed the work, but I eventually realized I didn't want to be doing that for the rest of my life. With the encouragement of my family and a friend that worked for the National Weather Service, I enrolled in the meteorology program at San Jose State University. My studies went well and I ended up with both a Bachelors Degree and a Masters Degree. After I finished up the Masters degree, I worked at Lawrence Livermore National Laboratory and for the State of Maryland. These were not permanent jobs and I wanted to get into a day to day weather forecasting position. When the opportunity came along, I jumped at the chance to be an intern at the National Weather Service office in Williston, ND. I was there for almost 3 years and it was a great experience. I learned about thunderstorms and severe winter weather. Blizzards and temperatures of -35 degrees were quite an eye opener for a Californian, but I loved the work. Western North Dakota was great and the people couldn't have been nicer.

Eventually though, I had to move on to be promoted in the National Weather Service. I wanted to be closer to my family on the west coast and I was delighted to be selected for the General Forecaster opening here in Pendleton. My wife and I are enjoying the friendly small town atmosphere and look forward to warmer, less snowy winters. We hope to part of the community for years to come.

Who We Are...

Weather Forecast Office Pendleton Staff List:

Michael Vescio	<i>Meteorologist In Charge</i>
Dennis Hull	<i>Warning Coordination Meteorologist</i>
Jon Mittlestadt	<i>Science and Operations Officer</i>
Jim Zdrojewski	<i>Observation Program Leader</i>
Rod Theis	<i>Electronic Systems Analyst</i>
Diana Locke	<i>Administrative Assistant</i>
Marilyn Lohmann	<i>Service Hydrologist</i>
Wade Earle	<i>Information Technology Officer</i>



Electronic Technicians:

Lynn Wilson
Johnny Blagg

Lead Forecasters:

Mary Smith
Vincent Papol
Zaaron Allen
Roger Cloutier
Joe Solomon

Journey Forecasters:

Alan Polan
Diann Coonfield
Cynthia Palmer
Gordon Hepburn
Jeremy Wolf
George Perry
Mike Cantin

Hydrometeorological Technicians:

Ann Adams
Jim Smith

Meteorologist Intern:

Diana Koester

Remember to get your latest National Weather Service forecast, go to:

www.weather.gov/Pendleton

Measuring Snowfall Correctly

What type of measuring device should I use? A simple ruler (or yardstick) will suffice.

Should I measure the snow in a particular place? The best-case scenario when measuring snow is to have it fall on a board (flat, square piece of plywood) that is placed in an area away from tall objects like trees. When no board is available, try taking measurements in a location as flat as possible, but not on roadways, that is relatively unsheltered. When taking a measurement take three readings then use an average as the snowfall amount. Try to be consistent by taking your measurements in the same place every time.

How do I ensure I get an accurate snowfall total after I've already measured and the snow keeps piling up?

It's best to clear off the spot where you've measured the snow after your measurement is done. That way you can see the new snowfall quite easily. By leaving an area uncleared nearby you'll still be able to track the total snow pack, as compared to the most recent snowfall!

Please report snow totals as you would a normal spot report. We love to get those snow totals!!